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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/751,725	01/05/2004	William Robert Ouellette	8222D	2250

27752 7590 06/02/2005

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EXAMINER	
TORRES VELAZQUEZ, NORCA LIZ	
ART UNIT	**PAPER NUMBER**
1771	

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/751,725	OUELLETTE ET AL.	
	Examiner	Art Unit	
	Norca L. Torres-Velazquez	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3 and 10-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3 and 10-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 02, 2005 has been entered.

2. Applicant's arguments filed May 02, 2005 have been fully considered but they are not persuasive.

a. Applicants have amended independent claim 1 to recite [a]n absorbent fibrous structure comprising a one ply web of entangled synthetic fibers... Support for such limitation is found at page 4, line 28 through page 5, line 1. Applicants further indicate that such amendment is to include the limitation that the web is made from a single ply of the eccentric bicomponent fibers and that the pending claims are novel over the MAYS art because MAYS discloses a fabric comprising multiple plies comprised of fibers of different materials.

It is first noted that the present independent claim 1 uses an open-ended language, "comprising" that does not exclude other type of materials in the fibrous structure. It is noted that the MAYS reference shows in Figure 5 shows a layer of conjugate fibers 80 provided at both surfaces of a layer of base fibers 82 and entangled therewith. After heat treatment to thermobond the conjugate fibers to each other and to the base fibers, the fabric is provided with reinforced surfaces 84 and 86, each comprising thermobonded entangled network of conjugate fibers and base fibers. (Page 15, lines 21-30; Figure 5) It is the Examiner's interpretation that the present invention as claimed does not preclude

the inclusion of the base fibers of the MAYS reference and that the entangled and thermally bonded product shown in Figure 5 of the reference is considered to be a "one ply" web.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by MAYS (EP 0171807 A2) further evidenced by MAGNUSSON (WO 99/00098).**

MAYS discloses an entangled nonwoven fabric having a layer of fusible fibers on one or both surfaces of a relatively thick layer of base fibers. The fusible fibers can be conjugate fibers. The thermoplastic fibers are located on the outer surface of the base fibers either prior to or subsequent to the entangling of the fibers. (Abstract) The reference teaches the use of polyolefin fibers with a melting temperature in the range of about 163-171 °C as thermoplastic fusible fibers. (Page 4, lines 23-26) MAYS shows in Figure 5 shows a layer of conjugate fibers 80 provided at both surfaces of a layer of base fibers 82 and entangled therewith. After heat treatment to thermobond the conjugate fibers to each other and to the base fibers, the fabric is provided with reinforced surfaces 84 and 86, each comprising thermobonded entangled network of conjugate fibers and base fibers. (Page 15, lines 21-30; Figure 5) It is the Examiner's interpretation that the present invention as claimed does not preclude the inclusion of

the base fibers of the MAYS reference and that the entangled and thermally bonded product shown in Figure 5 of the reference is considered to be a "one ply" web.

The reference teaches entangling the fabric and then passing it through a heating means where the low melting point component of the conjugate fibers is melted and bonding occurs at the point of intersection and tangency of the conjugate fibers. With this reinforcing of the outer surfaces by the bonding of the conjugate fiber to each other, the outer surfaces of the fabric are stronger and pilling and fraying is substantially decreased if not eliminated, without effecting the basic fabric characteristics, such as absorbency, of the base layer. (Page 6, line 31 through Page 7, lines 1-5) The reference teaches the use of sheath/core bicomponent fibers and also side-by-side conjugate fibers. (Page 9, lines 29-32) The reference teaches the use of fibers with lengths in excess of about 0.25 inches (0.635 cm) up to about 3 inches (7 cm). (Page 9, lines 35-36) In Figure 5, the reference shows a fabric with thermobonded fusible fibers in the surfaces. It is further noted that on page 14, lines 24-29 of the MAYS reference, the reference teaches that depending on the surface strength desired, the fiber content ratio of the fabric could be as low as 90 percent polyester, 10 percent conjugate fiber, and as high as 10 percent polyester and 90 percent conjugate fiber.

It is the Examiner's position that the MAYS reference provides the entangled synthetic fibers structure with a center region fibers not thermally bonded in the center region and with thermal bonding in the top and bottom surface. The reference meets the limitation of the fibers being bicomponent fibers of the sheath-core or side-by-side type. It is noted that eccentric bicomponent fibers are known in the art as a type of side-by-side bicomponent fiber. This is evidenced by MAGNUSSON that teaches an absorbent article that uses thermoplastic

bicomponent fibers of a side-by-side type. In Figure 2, the reference shows different types of side-by-side bicomponent fibers. Figure 2c is a bicomponent of an eccentric type. (Page 4, lines 1-11) It is the Examiner's position that MAYS teachings include side-by-side bicomponent fibers and this teaching is interpreted as being inclusive of all the different possible structures known in the art and evidenced by MAGNUSSON.

It is noted that although the prior art or record does not explicitly teach the claimed Ambient Temperature Oil Absorbency it is reasonable to presume that this property is inherent to the nonwoven fabric of MAYS. Support for said presumption is found in the use of like materials (i.e. a nonwoven of entangled bicomponent fibers that is heat bonded at the top and bottom surfaces; the fabric can have a fiber content ratio of 10 percent polyester and 90 percent conjugate fiber). The burden is upon Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed property of Ambient Temperature Oil Absorbency of at least about 7g/g would obviously have been present one the MAYS product is provided. Note In re Best, 195 USPQ at 433, footnote 4 (CCPA 1977) as to the providing of this rejection made above under 35 USC 102.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. **Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over TERADA (US 5,693,420) in view of MAYS.**

TERADA discloses a nonwoven fabric produced using side-by-side type or sheath-and-core type thermally fusible composite fibers. (Abstract) The sheath-and-core yarns may be concentric or eccentric. (Col. 4, lines 53-54) The fabric may be formed carding, air laying, paper making methods and the fabric may be subjected to heat treatments. The fabric is useful as an oil absorbing material as well as for forming absorbent trays to hold foods. (Col. 2, lines 31-41; Col. 4, lines 31-37; Col. 4, lines 54-65; Col. 5, lines 4-18; Col 5, lines 39-41)

While the reference teaches subjecting the fabric to heat treatment, it is silent to having a gradient of thermal bonding or thermally bonding just the surfaces and not the center region as claimed herein.

MAYS teaches a similar construction in which the fabric is entangled and then passed through a heating means where the low melting point component of the conjugate fibers is melted and bonding occurs at the point of intersection and tangency of the conjugate fibers. With this reinforcing of the outer surfaces by the bonding of the conjugate fiber to each other, the outer surfaces of the fabric are stronger and pilling and fraying is substantially decreased if not eliminated, without effecting the basic fabric characteristics, such as absorbency, of the base layer. (Page 6, line 31 through Page 7, lines 1-5)

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the fabric of the TERADA et al. reference and provide it with heat bonding in the outer surfaces with the motivation of increasing the strength of the outer surfaces while decreasing pilling and fraying, as disclosed by TERADA et al. It is noted that although the prior art or record does not explicitly teach the claimed Ambient Temperature Oil Absorbency it is reasonable to presume that this property is inherent to the nonwoven fabric of

TERADA and MAYS. Support for said presumption is found in the use of like materials (i.e. a nonwoven of entangled bicomponent fibers that is heat bonded at the top and bottom surfaces; the fabric can have a fiber content ratio of 10 percent polyester and 90 percent conjugate fiber). The burden is upon Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed property of Ambient Temperature Oil Absorbency of at least about 7g/g would obviously have been present one the TERADA and MAYS product is provided. Note In re Best, 195 USPQ at 433, footnote 4 (CCPA 1977) as to the providing of this rejection made above under 35 USC 102. Reliance upon inherency is not improper even though rejection is based on Section 103 instead of Section 102. *In re Skoner, et al.* (CCPA) 186 USPQ 80.

7. **Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over MAYS as applied to claims 1 and 3 above or in the alternative over TERADA in view of MAYS, and further in view of BRASSINGTON (WO 93/22486).**

MAYS and TERADA are silent to the density of the nonwoven web.

BRASSINGTON is concerned with an absorbent material suitable for use in medical or hygienic applications. (Page 1, first paragraph) The reference teaches the use of bicomponent fibers (Page 3, line 17), and uses similar methods of bonding the fabric (Page 4, lines 20-24). On page 9, lines 29-31; the reference teaches that the fabric web has a weight of 165 g/m^2 and a thickness of around 3.5 mm. The Examiner has calculated the density of the fabric disclosed by the reference based on the weight and thickness of the web and it provides a density of 47.14 mg/m^3. This values reads on the presently claimed density of about 100 mg/m^3 or less. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the web of MAYS or TERADA and MAYS and provide it with

a density of 47 mg/m^3 as in the BRASSINGTON reference motivated by the desire to produce a web with a density that is acceptable with applications such as medical or hygienic absorbent products.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 571-272-1484. The examiner can normally be reached on Monday-Thursday 8:00-5:00 pm and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Norca L. Torres-Velazquez
Examiner
Art Unit 1771

May 23, 2005

NORCA TORRES
PRIMARY EXAMINER